October 31, 2008

Ms. Karlene Fine
Executive Director
North Dakota Industrial Commission
600 East Boulevard Avenue
Bismarck, ND 58505

Dear Ms. Fine:

Subject: EERC Plains CO_2 Reduction Partnership (PCOR) Phase III Deliverable D58/59
Quarterly Technical Progress Report for the Period July 1 – September 30, 2008
Contract Nos. FY08-LX111-162 and G-015-030; EERC Fund 9824

Enclosed is a hard copy of the Quarterly Technical Progress Report for the PCOR Partnership Program for Phase III. Also enclosed is a disk containing the Quarterly Technical Progress Report. An electronic version is also being sent to you via e-mail.

If you have any questions, please call me at (701) 777-5279 or e-mail me at esteadman@undeerc.org.

Sincerely,

Edward N. Steadman
PCOR Partnership Manager
EERC Senior Research Advisor

ENS/sah

Enclosures

c/enc: Jeff Burgess, Lignite Energy Council
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Lynn Helms, NDIC Department of Mineral Resources, Oil and Gas Division

c: Corey Irion, EERC

PLAINS CO_2 REDUCTION PARTNERSHIP PHASE III

Quarterly Technical Progress Report
(for the period July 1 – September 30, 2008)

Prepared for:

Karlene Fine

Industrial Commission of North Dakota
600 East Boulevard Avenue
Bismarck, ND 58505

Contract Nos. FY08-LX111-162 and G-015-030
EERC Fund 9824

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October 2008

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PLAINS CO_2 REDUCTION PARTNERSHIP PHASE III
Quarterly Technical Progress Report
July 1 – September 30, 2008

INTRODUCTION

The Plains CO_2 Reduction (PCOR) Partnership has been established as a U.S. Department of Energy (DOE) National Energy Technology Laboratory (NETL) Regional Carbon Sequestration Partnership (RCSP). The PCOR Partnership is managed by the Energy & Environmental Research Center (EERC) at the University of North Dakota (UND) in Grand Forks, North Dakota. The PCOR Partnership region includes all or part of nine states (Iowa, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, Wisconsin, and Wyoming) and four Canadian provinces (Alberta, British Columbia, Manitoba, and Saskatchewan).

Phase III is a 10-year project, in three budget periods (BPs), running from October 1, 2007, to September 30, 2017. This progress report summarizes the activities for the reporting period (July 1 – September 30, 2008) for Phases III.

The activities for Phase III of the PCOR Partnership include two large-volume sequestration demonstration tests (Figure 1) along with continued regional characterization and outreach. Thirteen tasks will be implemented; see Table 1 for the responsibility matrix.

Table 1. Phase III Responsibility Matrix

Phase III Task Description	Responsible Party
Task 1 – Regional Characterization	Wes Peck
Task 2 – Public Outreach and Education	Dan Daly
Task 3 – Permitting and Compliance (NEPA)	Lisa Botnen
Task 4 – Site Characterization and Modeling	Jim Sorensen
Task 5 – Well Drilling and Completion	TBA
Task 6 – Infrastructure Development	Melanie Jensen
Task 7 – CO_2 Procurement	John Harju
Task 8 – Transportation and Injection Operations	TBA
Task 9 – Operational Monitoring and Modeling	TBA
Task 10 – Site Closure	TBA
Task 11 – Postinjection Monitoring and Modeling	TBA
Task 12 – Project Assessment	Stephanie Wolfe
Task 13 – Project Management	Ed Steadman

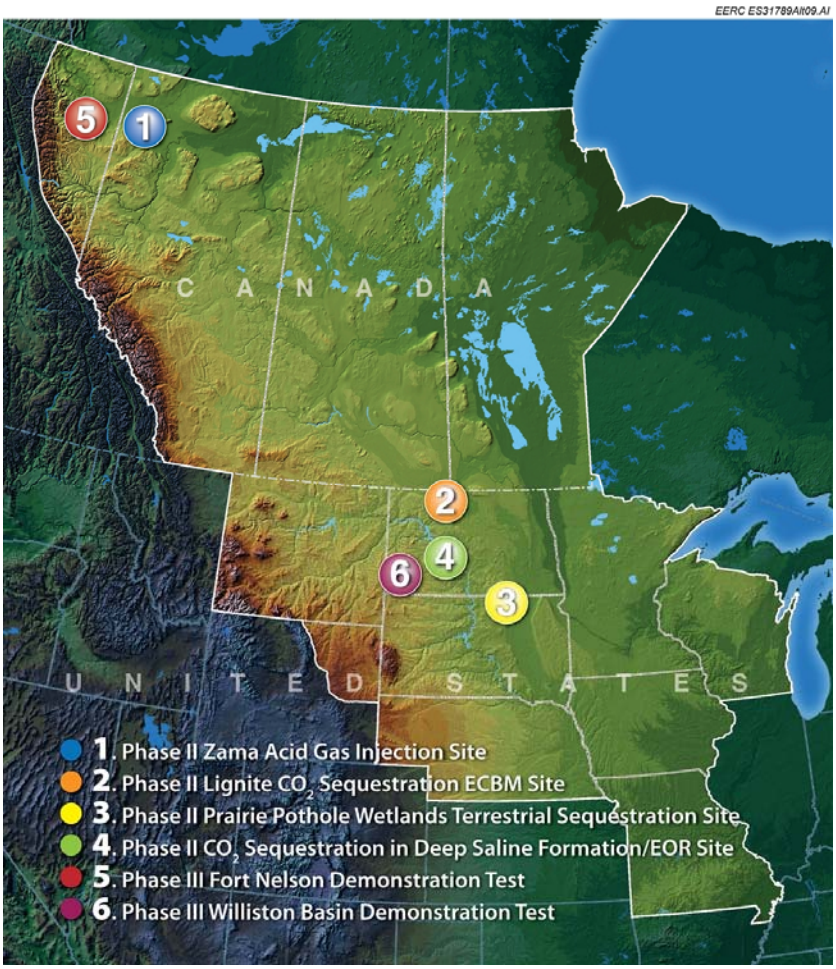

Figure 1. PCOR Partnership Phase III demonstration test sites.

SUMMARY OF SIGNIFICANT PHASE III ACCOMPLISHMENTS

Task 1 – Regional Characterization

A recent evaluation of the location accuracy of the CO_2 sources in the PCOR Partnership DSS database was conducted. The objective of this task was to verify the reported latitude/longitude location of each CO_2 source in the current PCOR Partnership database. The original location information was obtained from federal, state, and provincial sources (e.g., the U.S. EPA, Environment Canada). To meet this objective and ensure that the location information originally obtained from various public data sets was indeed valid, work study students were assigned the task of verifying the latitude/longitude values of each source facility plotted on an appropriate feature in an aerial photograph through the use of online global mapping applications, such as Google Earth. If the plotted location on the Web application was nowhere near a facility, the students were instructed to search a relatively local area. If, again, no facility could be found in the area, further online research was conducted to determine where the facility was located. This effort resulted in the repositioning of 755 locations. Of these modified

locations, 525 were shifted by more than 0.5 kilometers; the minimum offset distance that we considered to be significant.

A prototype for the Demonstration Project Reporting System (DPRS) has been compiled. Information (e.g., reports, summaries, tables, maps, etc.) generated in conducting the Phase III demonstration tests will be managed and reported to DOE and partners through the DPRS. The DPRS will be a Web-based interface designed to provide structured access to data by all demonstration participants and other partners to facilitate communication and interpretation of these data and to allow for efficient replication of additional or related demonstration projects.

Task 2 – Public Outreach and Education

During this reporting period, work proceeded on the Outreach Information System; a general Phase III fact sheet (deliverable D14) was completed and approved; Web pages were completed and approved for the Phase III demonstrations; and materials were completed for the Outreach Working Group (OWG).

Task 3 – Permitting and NEPA Compliance

During this reporting period, a thorough review of EPA's proposed rules for regulating geological sequestration under the UIC program was completed. A spreadsheet that compares and contrasts the EPA proposed rules with WRI Guidelines and IOGCC model rules was developed, and a draft of this document was provided to interested PCOR Partnership members at the annual meeting. Draft comments on EPA's proposed rules have been developed and submitted to an ad hoc committee of PCOR Partnership members. As input from PCOR Partnership members is received, the comments continue to be refined.

Analysis of regulatory risks is currently being conducted for the Fort Nelson project.

Task 4 – Site Characterization and Modeling

During this quarter, work began on the development of a Project Risk Assessment Plan for the Fort Nelson demonstration. Participants in the Fort Nelson Risk Assessment will include the EERC, Spectra Energy, Schlumberger, RPS Energy, Advanced Geotechnology, and Alberta Research Council. Development of deliverable D42 entitled "Williston Basin Field Validation Test Experimental Design Package" continued. Efforts were primarily focused on using well log data and field-based observations to characterize the general geological conditions of an area in southwestern North Dakota that includes several oil fields being considered for CO_2-based enhanced oil recovery activities under Phase III.

Task 5 – Well Drilling and Completion

This task has not begun (begins Quarter 2 – BP3, Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 6 – Infrastructure Development

Work on this task has been delayed while the plans for the CO_2 capture and geologic sequestration for the demonstration projects are finalized. Once the specific carbon capture and sequestration strategy for the demonstration project has been finalized, planned task activities related to CO_2 capture, compression, and pipeline design and routing can begin. In the interim, activities are being undertaken in support of the planned actions. Primary among these activities is the completion of the first year of the Ramgen Power Systems ("Ramgen") subcontract. It is hoped that Ramgen's novel shockwave-based CO_2 compression technology will be evaluated during one of the PCOR Partnership demonstration projects. Under the subcontract, Ramgen engineers have identified the specific parameters and characteristics that must be measured during such a demonstration and which will serve as guidelines for setting up the testing infrastructure as well as developing the test plan during the demonstration. Ramgen personnel also completed and verified a compression cost model that estimates increases in cost of electricity (COE) that would occur because of CO_2 capture and compression activities.

Task 7 – CO_2 Procurement

Numerous discussions with potential CO_2 suppliers have taken place. Because of the sensitive nature of negotiations, specifics cannot be shared at the present time.

Task 8 – Transportation and Injection Operations

This task has not begun (begins Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 9 – Operational Monitoring and Modeling

This task has not begun (begins Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 10 – Site Closure

This task has not begun (begins Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 11 – Postinjection Monitoring and Modeling

This task has not begun (begins Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 12 – Project Assessment

This task has not begun (begins Quarter 1 – BP3, Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly and annual progress reports.

Task 13 – Project Management

Phase III of the PCOR Partnership started October 1, 2007. Phase II members in good standing are automatically enrolled in Phase III for the first BP that overlaps with the last 2 years of Phase II (October 1, 2007 – September 30, 2009). As was denoted in Table 3, the PCOR Partnership currently has 81 partners. Activities in this reporting period include the following:

- A risk management plan (RMP) outline is due within BP3. An initial draft of the RPM has been started. The risk management database research has also begun; initial contact has been made with consulting services.
- Current and pending CO_2-related projects within the PCOR Partnership region are continuously changing. To better inform our partners, a Web site is presently being developed to exhibit CO_2 projects by location, parties involved, and Web site links to learn more about them.
- Work is under way to provide our partners with a topical report on past, present, and future carbon market activities.
- Preparations for the Carbon Sequestration Development and Finance Summit (October 22–24, 2008, in Houston, Texas) are currently under way.
  - The PCOR Partnership is participating in a carbon capture and technology showcase panel discussion (October 22, 2008).
- The PCOR Partnership participated in the Carbon Management Council's Webinar on Carbon Capture and Storage on August 21, 2008.
- The project management plan (PMP) (deliverable D63) has been revised to include updates on deliverable/milestone submissions and planned risk management activities. The PMP and statement of project objectives were originally submitted to DOE in December 2007; they were both updated and submitted on September 26, 2008.

PHASE III PROGRESS OF WORK

Task 1 – Regional Characterization

The Regional Characterization task entails the review, characterization, and update of the PCOR Partnership region's CO_2 sinks and sources for inclusion in the DSS. Activities in this reporting period include the following:

- The Missouri Department of Natural Resources Division of Geology and Land Survey (MDNR/DGLS) has completed a preliminary summary of the 14 principal coal seams of Missouri.
- Bedrock saline formations in the Cambrian, Ordovician, Mississippian, and Pennsylvanian strata are expected to exist in 53 Missouri counties along and northwest of a freshwater–saline water transition zone. Water quality maps and well logs from MDNR/DGLS, the U.S. Geological Survey (USGS), and EPA sources used to delineate the transition zone will be scanned and reviewed for pertinent water quality information such as potentiometric surfaces, porosity, and permeability.

- A bibliographic and literature review has been completed for historic and current reports on saline aquifers in Missouri located at MDNR/DGLS. These data include depth of well, casing amount, primary aquifer, geologic unit, and water quality. Parameters from these data being considered for the project include levels of total dissolved solids, residue on evaporation, chloride, sulfate, calcium, sodium, pH, conductance, and temperature. An ACCESS database has been designed for data entry and will be used to generate GIS layers.
- To supplement earlier data delivery products, the MDNR/DGLS provided information regarding produced water and GIS coverage of known oil/gas pools.
- A major remodel of the PCOR Partnership DSS is under way.
- A recent evaluation of the locational accuracy of the CO_2 sources in the PCOR Partnership DSS database was conducted. The objective of this task was to verify the reported latitude/longitude location of each CO_2 source in the current PCOR Partnership database. The original location information was obtained from federal, state, and provincial sources (e.g., the U.S. EPA, Environment Canada). To meet this objective and ensure that the location information originally obtained from various public data sets was indeed valid, work study students were assigned the task of verifying the latitude/longitude values of each source facility plotted on an appropriate feature in an aerial photograph through the use of online global mapping applications, such as Google Earth. If the plotted location on the Web application was nowhere near a facility, the students were instructed to search a relatively local area. If, again, no facility could be found in the area, further online research was conducted to determine where the facility was located. This effort resulted in the repositioning of 755 locations. Of these modified locations, 525 were shifted by more than 0.5 kilometers; the minimum offset distance that we considered to be significant.
- A prototype for the DPRS has been compiled. Information (e.g., reports, summaries, tables, maps, etc.) generated in conducting the Phase III demonstration tests will be managed and reported to DOE and partners through the DPRS. The DPRS will be a Web-based interface designed to provide structured access to data by all demonstration participants and other partners to facilitate communication and interpretation of these data and to allow for efficient replication of additional or related demonstration projects.

Task 2 – Public Outreach and Education

Task 2 will provide stakeholders and the general public with information on sequestration methods, opportunities, and developments, including updates on the demonstration projects. Activities in this reporting period include the following:

- Draft Web pages for the field demonstrations for the public Web site (deliverable D12) were completed, submitted on schedule at the end of July, and approved. This activity included an updated field test page in the Web site, new geologic columns, and an updated map.
- Efforts continued to populate the Outreach Information System, which will contain a record of outreach activities as well as provide a basis for assessing audience exposure to outreach activities. Demographic information was obtained for the U.S. portion from

the region, and an information request was developed for the Canadian portion of the area; information on school districts and contacts was obtained; information on public broadcasting market areas was obtained; draft maps were developed; extension service contacts and meeting schedules were obtained; and an assessment of outreach (visits to public Web site, newspaper articles, and other outreach activities) was conducted for the period July 1, 2007, to June 30, 2008.

- A pro-sumer-grade videocamera, capable of taking high-definition images, was purchased, along with supporting components. The camera will provide the capability to obtain video for use on the public Web site and to provide supplementary material to the PPB documentary productions.
- A scope of work was completed for the development of an education packet on sequestration in the region to be made available to teachers in the spring of 2009.
- A preliminary list of video clips was prepared based on the documentary products and other materials. The clips range from a half minute to 5 minutes in length and are intended to supplement the PowerPoints and public Web site.

In addition, members of the outreach team took part in the monthly conference calls and related activities of the OWG.

Task 3 – Permitting and NEPA Compliance

The goal of Task 3 is to obtain all the permits and approvals that are needed to comply with state, provincial, and federal requirements. Activities for the reporting period included the following:

- Analysis of carbon market strategies continued.
- A thorough review of EPA's proposed rules for regulating geological sequestration under the UIC program was completed. A spreadsheet that compares and contrasts the EPA-proposed rules with WRI Guidelines and IOGCC model rules was developed, and a draft of this document was provided to interested PCOR Partnership members at the annual meeting. Draft comments on EPA's proposed rules have been developed and submitted to an ad hoc committee of PCOR Partnership members. As input from PCOR Partnership members is received, the comments continue to be refined.
- PCOR Partnership staff continued to follow legislative actions occurring in Congress.
- Review continued of recent publications relating to regulating CO_2 sequestration and MMV issues.
- Participated in a conference call with a task force that is working on geologic sequestration legislation for the state of North Dakota.
- Frequent updates are provided to task leaders with regard to federal, state, and provincial actions.
- Completed a review of the regulatory and economics section of IEA's "Draft Aquifer Storage – Development Issues" document.
- Analysis of regulatory risks is currently being conducted for the Fort Nelson project.
- Actions by the province of British Columbia are continually monitored for the effect they may have on the Fort Nelson demonstration project.

Task 4 – Site Characterization and Modeling

Task 4 is focused on evaluating the effectiveness of large-scale CO_2 sequestration in geological formations at two different sites. The first site will examine CO_2 sequestration in conjunction with EOR operations in a deep carbonate reservoir in the Williston Basin. The second will examine CO_2 sequestration in a carbonate brine-saturated formation basin in northwestern Canada.

The EERC met with Spectra Energy, Natural Resources Canada, and Schlumberger in Calgary, Alberta, July 8–11, 2008, to discuss the key elements of the MMV plan for the Fort Nelson Demonstration. Regional characterization activities included:

- Continued development of a petrophysical model of saline formation systems in the Washburn study area.
- Updating the oil field data in the DSS continued. Information for the state of North Dakota has been completely updated. Working with relevant agencies in other states and provinces to facilitate the updating process continued.
- Estimates of storage capacity of several saline formation systems in the Washburn Study Area of central North Dakota were finalized.

Development of the MMV plan for the Fort Nelson demonstration continued. Efforts were focused on gathering and evaluating subsurface geological data, including historical seismic data. The EERC met with Spectra Energy, Natural Resources Canada, and Schlumberger in Minneapolis, Minnesota, September 9–11, 2008, to discuss the key elements of site characterization and the MMV plan for the Fort Nelson demonstration.

Task 5 – Well Drilling and Completion

Task 5 will develop the engineering designs for the installation of necessary injection, production, and monitoring wells. This task has not begun (begins Quarter 2 – BP3; Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 6 – Infrastructure Development

During Task 6, the infrastructure associated with the capture, dehydration, compression, and pipeline transportation required moving the CO_2 from the source to the oil field will be developed. Activities performed during the reporting period included:

- Ramgen Power Systems completed its compression cost model. Ramgen's cost model is based upon the simplified DOE calculations for COE, as referenced in a number of DOE publications. The model was validated through comparison of the cost penalties calculated by the model with the results of several pulverized coal studies with and without CCS capability. Ramgen then enhanced the model to differentiate the financial penalty of CCS between the contribution from capture and compression, and capital and operating costs. The model indicates that compression contributes one-third of the cost

penalty and capture contributes the other two-thirds. Operating costs and efficiency are widely believed to drive COE more than capital outlay. The Ramgen model shows that capital costs make up roughly 40%–43% of the increase in COE while operating costs make up 57%–60% of the increase in COE.

- As required for the Ramgen subcontract on this task, Ramgen engineers have identified the specific parameters and characteristics that must be measured during a small-scale, single-stage, high-pressure-ratio Rampressor demonstration at a coal-fired power plant. These requirements, which Ramgen considers to be proprietary at this time, will serve as guidelines for setting up the testing infrastructure as well as developing the test plan at the demonstration site.
- Aaron Koopman of Ramgen Power Systems presented material about both CO_2 compression in general and the Rampressor technology at the PCOR Partnership Annual Meeting and its associated capture workshop.

During the reporting period, a CO_2 Capture, Separation, and Compression Workshop was planned, organized, and presented on September 16, 2008, in conjunction with the PCOR Partnership 2008 Annual Meeting held in Maple Grove, Minnesota.

A table of capture technologies with links to Web-based information about each of them was prepared for inclusion in the PCOR Partnership DSS "Partners Only" Web site. Following project management review, it will be placed on the DSS "Partners-Only" Web site.

The detailed information gathered while preparing the capture technologies table is being used to prepare an updated PCOR Partnership CO_2 capture technology overview.

Task 7 – CO_2 Procurement

This task involves the documentation of the procedures to procure CO_2 for EOR activities. Numerous discussions with potential CO_2 suppliers have taken place. Because of the sensitive nature of negotiations, specifics cannot be shared at the present time.

Task 8 – Transportation and Injection Operations

This task will consist of monitoring and documenting commercial partner activities related to the CO_2 pipeline for leaks and corrosion, as well as performing inspections and security checks. This task has not begun (begins Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 9 – Operational Monitoring and Modeling

Task 9 will develop site characterization, modeling, and monitoring for the Williston Basin and the Fort Nelson test sites. This task has not begun (begins Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 10 – Site Closure

Task 10 will require research to be conducted with regard to those site closure practices and procedures that would be applicable for this type of operation. This task has not begun (begins Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 11 – Postinjection Monitoring and Modeling

Postinjection monitoring and modeling will use the data generated by the site characterization and monitoring activities to provide the technical basis for the formal establishment of carbon credits that are directly linked to the volume of CO_2 injected into the site and a third-party carbon-trading entity to validate and ultimately monetize the credits derived for the Phase III tests. This task has not begun (begins Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 12 – Project Assessment

This task has not begun (begins Quarter 1 – BP3, Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly and annual progress reports. The Project Assessment Annual Reports (D57) will summarize project progress, accomplishments, and goals. The first project assessment report is due December 31, 2008.

Task 13 – Project Management

Project management involves the development and distribution of required project reports, as well as overall project management duties. The project manager (PM) and task leaders meet on a monthly basis to report the progress of their tasks and discuss any issues and corrective actions necessary. Each task leader is also responsible to communicate and keep track of any subcontractors they may have in their respective tasks. Task leaders are also responsible to provide the PM with written weekly updates. These updates include highlights (including trip reports), issues (i.e., budget, staffing, technical issues, etc.), opportunities, and travel plans. The monthly updates can be found on the PCOR Partnership DSS homepage.

The deliverable entitled "D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report" was submitted to DOE for approval on June 30, 2008.

PHASE III COST STATUS

The approved BP3 budget along with actual costs incurred and in-kind cost share reported is shown in Table 2. An expected spending plan by quarter of cash funds for BP3 is provided in Figure 2 and Table 3.

Table 2. Phase III Budget – BP3

Organization	Approved Budget	Actual Costs Incurred
DOE Share – Cash	$5,300,000	$1,516,008
Nonfederal Share – Cash	$2,808,847	$204,037
Nonfederal Share – In-Kind	$5,577,212	$0
Total	$13,686,059	$1,720,045

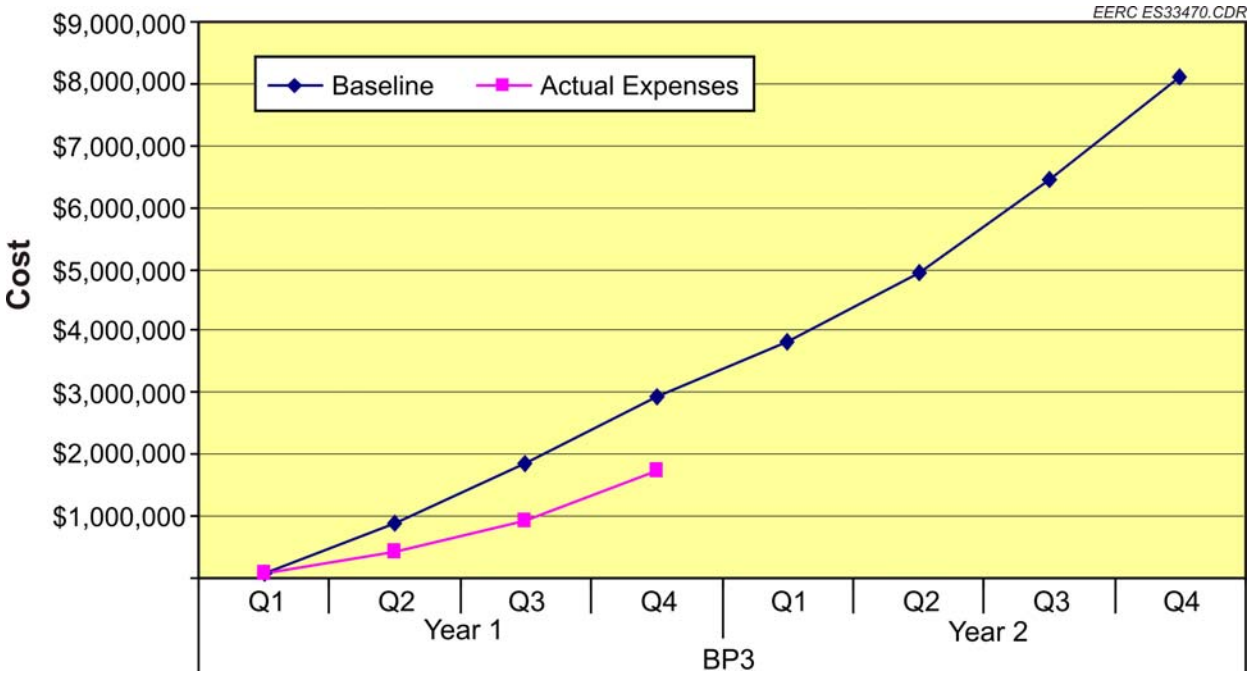

Figure 2. PCOR Partnership Phase III BP3 funding (cash only).

PHASE III SCHEDULE STATUS

Table 4 contains all of the Phase III deliverables, milestones, and submission dates for the reporting period. Because negotiations are ongoing and still uncertain for our partners in the Williston Basin demonstration, various deliverables and milestones have been extended and approved by DOE.

See Table 4 for a listing of all deliverables and milestones by quarter, with completion dates, for the duration of the project. See Table 5 for a listing of deliverables and milestones by quarter for BP3.

Table 3. BP3 Spending Plan

Budget Period 3

Baseline Reporting Quarter	Year 1								Year 2							
	Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4	
	Q1	Cum. BP Total	Q2	Cum. BP Total	Q3	Cum. BP Total	Q4	Cum. BP Total	Q1	Cum. BP Total	Q2	Cum. BP Total	Q3	Cum. BP Total	Q4	Cum. BP Total
Baseline Cost Plan																
Federal Share	$ 88,728	$ 88,728	$ 318,976	$ 407,704	$ 510,620	$ 918,324	$ 600,000	$ 1,518,324	$ 567,251	$ 2,085,575	$ 756,335	$ 2,841,911	$ 1,134,503	$ 3,976,413	$ 1,323,587	$ 5,300,000
Non-Federal Share	$ -	$ -	$ 467,179	$ 467,179	$ 467,180	$ 934,359	$ 467,180	$ 1,401,539	$ 351,827	$ 1,753,366	$ 351,827	$ 2,105,193	$ 351,827	$ 2,457,020	$ 351,827	$ 2,808,847
Total Planned	$ 88,728	$ 88,728	$ 786,155	$ 874,883	$ 977,800	$ 1,852,683	$ 1,067,180	$ 2,919,863	$ 919,078	$ 3,838,941	$ 1,108,162	$ 4,947,104	$ 1,486,330	$ 6,433,433	$ 1,675,414	$ 8,108,847
Actual Incurred Cost																
Federal Share	$ 88,728	$ 88,728	$ 318,976	$ 407,704	$ 510,620	$ 918,324	$ 597,684	$ 1,516,008								
Non-Federal Share	$ -	$ -	$ -	$ -	$ -	$ -	$ 204,037	$ 204,037								
Total Incurred Cost	$ 88,728	$ 88,728	$ 318,976	$ 407,704	$ 510,620	$ 918,324	$ 801,721	$ 1,720,045								
Variance																
Federal Share	$ (0)	$ (0)	$ (0)	$ (0)	$ (0)	$ (0)	$ 2,316	$ 2,316								
Non-Federal Share	$ -	$ -	$ 467,179	$ 467,179	$ 467,180	$ 934,359	$ 263,143	$ 1,197,502								
Total Variance	$ (0)	$ (0)	$ 467,179	$ 467,179	$ 467,180	$ 934,359	$ 265,459	$ 1,199,818								

Table 4. Phase III Milestones and Deliverables

Title/Description	Due Date	Actual Completion Date
Year 1 – Quarter 1 (October–December 2007)		
M17: Task 4 – Fort Nelson Test Site Selected	12/31/07	12/28/07
D37: Task 4 – Fort Nelson Test Site – Site Geological Characterization Experimental Design Package	12/31/07	12/28/07
D63: Task 13 – Project Management Plan	12/31/07	12/28/07
Year 1 – Quarter 2 (January–March 2008)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/08	1/31/08
D38: Task 4 – Fort Nelson Test Site – Geomechanical Experimental Design Package	1/31/08	1/31/08
M1: Task 1 – Three Target Areas Selected for Detailed Characterization	3/31/08	3/20/08
M18: Task 4 – Fort Nelson Test Site Geochemical Work Initiated	3/31/08	3/19/08
D11: Task 2 – Outreach Plan	3/31/08	3/31/08
D30: Task 4 – Williston Basin Test Site – Geomechanical Experimental Design Package	3/31/08	3/31/08
D27: Task 3 – Environmental Questionnaire – Fort Nelson Test Site	3/31/08	4/2/08
Year 1 – Quarter 3 (April–June 2008)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/08	4/30/08
D14: Task 2 – General Phase III Fact Sheet	4/30/08	4/30/08
D17: Task 2 – General Phase III Information PowerPoint Presentation	5/30/08	5/30/08
M3: Task 3 – Start Environmental Questionnaire for Williston Basin Test Site	6/30/08	6/27/08
M6: Task 4 – Williston Basin Test Site Geochemical Work Initiated	6/30/08	6/30/08
M7: Task 4 – Williston Basin Test Site Geological Characterization Data Collection Initiated	6/30/08	6/30/08
Year 1 – Quarter 4 (July–September 2008)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/08	7/31/08
D12: Task 2 – Demonstration Web Pages on the Public Site	7/31/08	7/31/08
M2: Task 1 – Demonstration Project Reporting System Prototype Completed	9/30/08	9/26/08
D1: Task 1 – Review of Source Attributes	9/30/08	9/26/08
Year 2 – Quarter 1 (October–December 2008)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/08	
M4: Task 4 – Williston Basin Test Site Selected	12/31/08	
M5: Task 4 – Data Collection Initiated for Williston Basin Test Site	12/31/08	
D20: Task 2 – Documentary Support to PowerPoint and Web Site	12/31/08	
D57: Task 12 – Project Assessment Annual Report	12/31/08	

Continued…

Table 4. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 2 – Quarter 2 (January–March 2009)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/09	
D28: Task 3 – Environmental Questionnaire – Williston Basin Test Site	1/31/09	
D31: Task 4 – Williston Basin Test Site – Geological Characterization Experimental Design Package	2/28/09	
D15: Task 2 – Williston Basin Test Site Fact Sheet	2/28/09	
D2: Task 1 – First Target Area Completed	3/31/09	
D24: Task 2 – PCOR Partnership Region Sequestration General Poster	3/31/09	
D29: Task 3 – Permitting Action Plan	3/31/09	
Year 2 – Quarter 3 (April–June 2009)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/09	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	4/30/09	
M8: Task 4 – Williston Basin Test Site Wellbore Leakage Data Collection Initiated	5/29/09	
D16: Task 2 – Fort Nelson Test Site Fact Sheet	5/29/09	
D66: Task 4 – Williston Basin Test Site – Simulation Report	6/30/09	
Year 2 – Quarter 4 (July–September 2009)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/09	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	7/31/09	
D67: Task 4 – Fort Nelson Test Site – Simulation Report	7/31/09	
D42: Task 5 – Williston Basin Test Site – Injection Experimental Design Package	8/31/09	
M9: Task 4 – Williston Basin Test Site B – Version Geological Model Development Initiated	9/30/09	
M10: Task 4 – Williston Basin Test Site Wellbore Leakage Data Collection Completed	9/30/09	
M11: Task 4 – Williston Basin Test Site Baseline Hydro Data Collection Completed	9/30/09	
M12: Task 4 – Williston Basin Test Site Geochemical Work Completed	9/30/09	
M19: Task 6 – Capture, Dehydration, and Compression Technology Selected	9/30/09	
D9: Task 1 – Updated DSS	9/30/09	
D1: Task 1 – Review of Source Attributes	9/30/09	
D3: Task 1 – Permitting Review – One State and One Province	9/30/09	
D40: Task 4 – Fort Nelson Test Site – Geomechanical Final Report	9/30/09	
D43: Task 5 – Williston Basin Test Site – Monitoring Experimental Design Package	9/30/09	

Continued…

Table 4. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 2 – Quarter 4 (July–September 2009), continued		
D47: Task 6 – Topical Report on the Preliminary Design of Advanced Compression Technology	9/30/09	
D60: Task 13 – Site Development, Operations, and Closure Plan	9/30/09	
D61: Task 13 – Site Commercialization Plan	9/30/09	
D64: Task 4 – Williston Basin Test Site – Site Characterization Report	9/30/09	
D65: Task 4 – Fort Nelson Test Site – Site Characterization Report	9/30/09	
D77: Task 13 – Risk Management Plan Outline	9/30/09	
Year 3 – Quarter 1 (October–December 2009)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/09	
M13: Task 4 – Williston Basin Test Site B – Version Geological Model Development Completed	12/31/09	
M14: Task 4 – Williston Basin Test Site Geological Characterization Data Collection Completed	12/31/09	
M15: Task 4 – Williston Basin Test Site Baseline Hydro B – Model Completed	12/31/09	
D41: Task 4 – Fort Nelson Test Site – Geochemical Final Report	12/31/09	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/09	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/09	
D57: Task 12 – Project Assessment Annual Report	12/31/09	
Year 3 – Quarter 2 (January–March 2010)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/10	
D11: Task 2 – Outreach Plan	3/31/10	
D32: Task 4 – Williston Basin Test Site – Geomechanical Final Report	3/31/10	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/10	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/10	
Year 3 – Quarter 3 (April–June 2010)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/10	
D13: Task 2 – Public Site Updates	6/30/10	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/10	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/10	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/10	

Continued…

Table 4. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 3 – Quarter 3 (April–June 2010), continued		
D25: Task 2 – Williston Basin Test Site Poster	6/30/10	
D33: Task 4 – Williston Basin Test Site – Geochemical Final Report	6/30/10	
D34: Task 4 – Williston Basin Test Site – Baseline Hydrogeological Final Report	6/30/10	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/10	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/10	
Year 3 – Quarter 4 (July–September 2010)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/10	
D70: Task 4 – Fort Nelson Test Site – Best Practices Manual – Simulation Report	8/31/10	
M16: Task 4 – Williston Basin Test Site Final Geological Model Development Completed	9/30/10	
D1: Task 1 – Review of Source Attributes	9/30/10	
D10: Task 1 – Demonstration Project Reporting System Update	9/30/10	
D26: Task 2 – Fort Nelson Test Site Poster	9/30/10	
D35: Task 4 – Williston Basin Test Site – Best Practices Manual – Site Characterization	9/30/10	
D36: Task 4 – Williston Basin Test Site – Wellbore Leakage Final Report	9/30/10	
D48: Task 7 – Procurement Plan and Agreement Report	9/30/10	
D50: Task 9 – Williston Basin Test Site – Site Characterization, Modeling, and Monitoring Plan	9/30/10	
D52: Task 9 – Fort Nelson Test Site – Site Characterization, Modeling, and Monitoring Plan	9/30/10	
D68: Task 4 – Fort Nelson Test Site – Best Practices Manual – Site Characterization	9/30/10	
D69: Task 4 – Williston Basin Test Site – Best Practices Manual – Simulation Report	9/30/10	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/10	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/10	
Year 4 – Quarter 1 (October–December 2010)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/10	
M20: Task 6 – Capture, Dehydration, and Compression Technology Design Completed	10/31/10	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/10	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/10	
D57: Task 12 – Project Assessment Annual Report	12/31/10	

Continued…

Table 4. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 4 – Quarter 2 (January–March 2011)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/11	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/11	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/11	
Year 4 – Quarter 3 (April–June 2011)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/11	
D21: Task 2 – Williston Basin Test Site 15-minute Documentary	6/30/11	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/11	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/11	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/11	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/11	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/11	
Year 4 – Quarter 4 (July–September 2011)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/11	
D1: Task 1 – Review of Source Attributes	9/30/11	
D4: Task 1 – Permitting Review – Two Additional States	9/30/11	
D9: Task 1 – Updated DSS	9/30/11	
D45: Task 6 – Topical Report on the Integrated Capture Plant and Its Shakedown	9/30/11	
D46: Task 6 – Topical Report on Pipeline Route Selection, Design, and Construction	9/30/11	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/11	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/11	
Year 5 – Quarter 1 (October–December 2011)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/11	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/11	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/11	
D57: Task 12 – Project Assessment Annual Report	12/31/11	
Year 5 – Quarter 2 (January–March 2012)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/12	
D5: Task 1 – Second Target Area Completed	3/31/12	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/12	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/12	

Continued…

Table 4. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 5 – Quarter 3 (April–June 2012)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/12	
D13: Task 2 – Public Site Updates	6/30/12	
D22: Task 2 – Fort Nelson Test Site 15-minute Documentary	6/30/12	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/12	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/12	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/12	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/12	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/12	
Year 5 – Quarter 4 (July–September 2012)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/12	
D1: Task 1 – Review of Source Attributes	9/30/12	
D10: Task 1 – DPRS Update	9/30/12	
D44: Task 5 – Williston Basin Test Site – Drilling and Completion Activities Final Report	9/30/12	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/12	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/12	
Year 6 – Quarter 1 (October–December 2012)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/12	
D14: Task 2 – General Phase III Fact Sheet	12/31/12	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/12	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/12	
D57: Task 12 – Project Assessment Annual Report	12/31/12	
Year 6 – Quarter 2 (January–March 2013)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/13	
D15: Task 2 – Williston Basin Test Site Fact Sheet	3/31/13	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/13	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/13	
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/13	
D16: Task 2 – Fort Nelson Test Site Fact Sheet	6/30/13	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/13	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/13	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/13	

Continued…

Table 4. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 6 – Quarter 2 (January–March 2013), continued		
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/13	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/13	
Year 6– Quarter 4 (July–September 2013)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/30/13	
D1: Task 1 – Review of Source Attributes	9/30/13	
D6: Task 1 – Permitting Review – Three States and Two Provinces	9/30/13	
Year 6– Quarter 4 (July–September 2013), continued		
D9: Task 1 – Updated DSS	9/30/13	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/13	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/13	
Year 7 – Quarter 1 (October–December 2013)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/13	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/13	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/13	
D57: Task 12 – Project Assessment Annual Report	12/31/13	
Year 7 – Quarter 2 (January–March 2014)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/14	
D24: Task 2 – PCOR Partnership Region Sequestration General Poster	3/31/14	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/14	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/14	
Year 7 – Quarter 3 (April–June 2014)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/14	
D13: Task 2 – Public Site Updates	6/30/14	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/14	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/14	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/14	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/14	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/14	
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/14	
D1: Task 1 – Review of Source Attributes	9/30/14	
D7: Task 1 – Third Target Area Completed	9/30/14	

Continued…

Table 4. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 7 – Quarter 4 (July–September 2014), continued		
D10: Task 1 – Demonstration Project Reporting System Update	9/30/14	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/14	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/14	
Year 8 – Quarter 1 (October–December 2014)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/14	
D75: Task 3 – Updated Permitting Action Plan	10/30/14	
D25: Task 2 – Williston Basin Test Site Poster	12/31/14	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/14	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/14	
D57: Task 12 – Project Assessment Annual Report	12/31/14	
Year 8 – Quarter 2 (January–March 2015)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/15	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/15	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/15	
Year 8 – Quarter 3 (April–June 2015)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/15	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/15	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/15	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/15	
D26: Task 2 – Fort Nelson Test Site Poster	6/30/15	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/15	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/15	
Year 8 – Quarter 4 (July–September 2015)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/15	
D1: Task 1 – Review of Source Attributes	9/30/15	
D8: Task 1 – Permitting Review – Three States and One Province	9/30/15	
D9: Task 1 – Updated DSS	9/30/15	
D49: Task 8 – Transportation and Injection Operations Final Report	9/30/15	
D51: Task 9 – Williston Basin Test Site – Monitoring for CO_2, EOR, and Sequestration Best Practices Manual	9/30/15	

Continued…

Table 4. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 8 – Quarter 4 (July–September 2015), continued		
D53: Task 9 – Fort Nelson Test Site – Monitoring for CO_2 Sequestration in a Brine Formation Best Practices Manual	9/30/15	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/15	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/15	
Year 9 – Quarter 1 (October–December 2015)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/15	
D14: Task 2 – General Phase III Fact Sheet	12/31/15	
D23: Task 2 – Sequestration in Carbon Management – 30-minute Documentary	12/31/15	
D57: Task 12 – Project Assessment Annual Report	12/31/15	
Year 9 – Quarter 2 (January–March 2016)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/16	
D11: Task 2 – Outreach Plan	3/31/16	
D15: Task 2 – Williston Basin Test Site Fact Sheet	3/31/16	
D55: Task 11 – Report on Cost-Effective Long-Term Monitoring Strategies for the Williston Basin Test Site	3/31/16	
D56: Task 11 – Report on Cost-Effective Long-Term Monitoring Strategies for the Fort Nelson Test Site	3/31/16	
Year 9– Quarter 3 (April–June 2016)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/16	
D13: Task 2 – Public Site Updates	6/30/16	
D16: Task 2 – Fort Nelson Test Site Fact Sheet	6/30/16	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/16	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/16	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/16	
Year 9 – Quarter 4 (July–September 2016)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/16	
D1: Task 1 – Review of Source Attributes	9/30/16	
D10: Task 1 – Demonstration Project Reporting System Update	9/30/16	

Continued…

Table 4. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 9 – Quarter 4 (July–September 2016), continued		
D73: Task 11 – Williston Basin Test Site – Progress Report on Monitoring and Modeling Fate of CO_2	9/30/16	
D74: Task 11 – Fort Nelson Test Site – Progress Report on Monitoring and Modeling Fate of CO_2	9/30/16	
Year 10 – Quarter 1 (October–December 2016)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/16	
D57: Task 12 – Project Assessment Annual Report	12/31/16	
Year 10 – Quarter 2 (January–March 2016)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/17	
Year 10 – Quarter 3 (April–June 2017)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/17	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/17	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/17	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/17	
Year 10 – Quarter 4 (July–September 2017)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/17	
D54: Task 10 – Site Closure Report	9/30/17	
D73: Task 11 – Williston Basin Test Site – Progress Report on Monitoring and Modeling Fate of CO_2	9/30/17	
D74: Task 11 – Fort Nelson Test Site – Progress Report on Monitoring and Modeling Fate of CO_2	9/30/16	
D76: Task 3 – Best Practices Manual – Permitting	9/30/17	
D62: Task 13 – Final Report	9/30/17	
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/17	

Table 5. PCOR Partnership Phase III BP3 Milestones and Deliverables (Gantt chart)

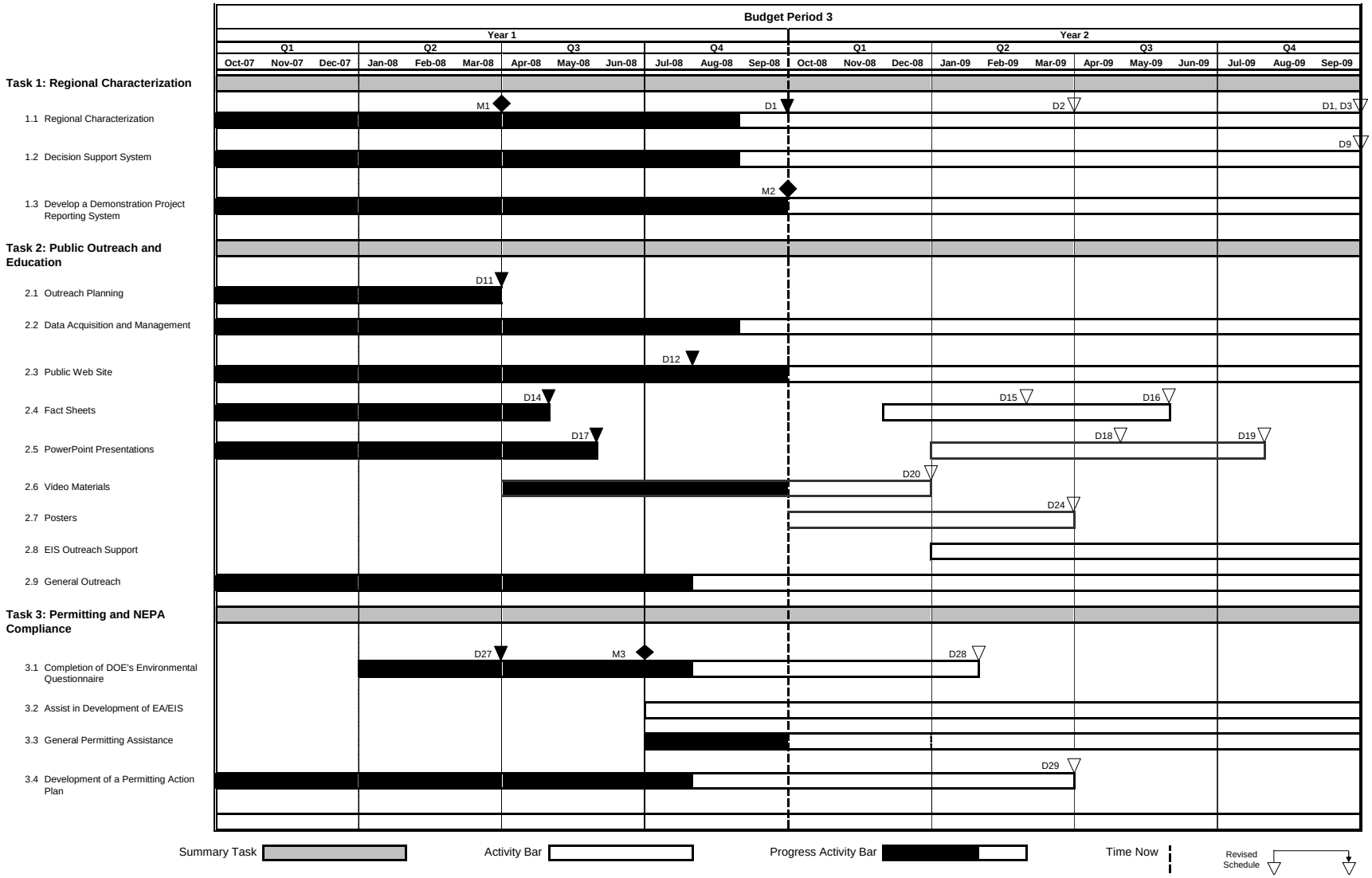

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Table 5. PCOR Partnership Phase III BP3 Milestones and Deliverables (Gantt chart) (continued)

Key for Phase III Deliverables (D)

D1	Review of Source Attributes
D2	First Target Area Completed
D3	Permitting Review – One State and One Province
D9	Updated DSS
D11	Outreach Plan
D12	Demonstration Web Pages on the Public Site
D14	General Phase III Fact Sheet
D15	Williston Basin (WB) Test Site Fact Sheet
D16	Fort Nelson Test Site Fact Sheet
D17	General Phase III Information PowerPoint Presentation
D18	WB Test Site PowerPoint Presentation
D19	Fort Nelson (FN) Test Site PowerPoint Presentation
D20	Video Support to PowerPoint and Web Site
D24	PCOR Region Sequestration General Poster
D27	FN Test Site – Environmental Questionnaire
D28	WB Test Site – Environmental Questionnaire
D29	Permitting Action Plan
D30	WB Test Site – Geomechanical Experimental Design Package
D31	WB Test Site – Site Geological Characterization Experimental Design Package
D37	FN Test Site – Site Geological Characterization Experimental Design Package
D38	FN Test Site – Geomechanical Experimental Design Package
D40	FN Test Site – Geomechanical Final Report
D42	WB Test Site – Injection Experimental Design Package
D43	WB Test Site – Monitoring Experimental Design Package
D47	Topical Report on the Preliminary Design of Advanced Compression Technology
D57	Project Assessment Annual Report
D58	Quarterly Progress Report
D59	Milestone Quarterly Report
D60	Site Development, Operations, and Closure Plan
D61	Site Commercialization Plan
D63	Project Management Plan
D64	WB Test Site – Site Characterization Report
D65	FN Test Site – Site Characterization Report
D66	WB Test Site – Simulation Report
D67	FN Test Site – Simulation Report
D77	Risk Management Plan Outline

Key for Phase III Milestone (M)

M1	Three Target Areas Selected
M2	DPRS Prototype
M3	Start Environmental Questionnaire for WB Test Site
M4	WB Test Site Selected
M5	Data Collection Initiated for WB Test Site
M6	WB Test Site Geochemical Work Initiated
M7	WB Test Site Geological Characterization Data Collection Initiated
M8	WB Test Site Wellbore Leakage Data Collection Initiated
M9	WB Test Site B - Version Geological Model Development Initiated
M10	WB Test Site Wellbore Leakage Data Collection Completed
M11	WB Test Site Baseline Hydro Data Collection Completed
M12	WB Test Site Geochemical Work Completed
M17	FN Test Site Selected
M18	FN Test Site Geochemical Work Initiated
M19	Capture, Dehydration, and Compression Technology Selected

ACTUAL OR ANTICIPATED PHASE III PROBLEMS OR DELAYS

Task 1 – Regional Characterization

Nothing to note at this time.

Task 2 – Public Outreach and Education

As stated in the Schedule Status section of this report, the PCOR Partnership is still seeking a specific location for the Williston Basin demonstration site and is currently waiting for information from a participating partner. As a result, Deliverable D15 (Williston Basin Test Fact Sheet) will be conceptual in nature and will be revised as the demonstration develops.

Task 3 – Permitting and NEPA Compliance

As stated in the Schedule Status section of this report, because negotiations are ongoing and still uncertain for PCOR Partnership partners in the Williston Basin demonstration, attendant deliverables and milestones were approved for extension by DOE:

Task 4 – Site Characterization and Modeling

The selection of a site for the Williston Basin Phase III demonstration has been delayed for two quarters. This will also cause delays in other site-specific activities, such as the development of a NEPA document, site-specific characterization activities, site-specific MMV planning, and site-specific public outreach activities.

Negotiations between Basin Electric Power Cooperative (the company providing the CO_2 for the Williston Basin project) and the oil companies continue to be ongoing. No deals have been completed; therefore, no site has been formally accepted or schedule of activities set.

Task 5 – Well Drilling and Completion

As stated in the Schedule Status section of this report, because of delays in the Williston Basin demonstration, Task 5 activities will be initiated January 1, 2009 (original start date was October 1, 2008).

Task 6 – Infrastructure Development

Some of the work on this task has been delayed while the plans for the CO_2 capture and geologic sequestration for the demonstration projects are finalized. Once the specific carbon capture and sequestration strategy for the demonstration project has been finalized, planned task activities related to CO_2 capture, compression, and pipeline design and routing can begin. In the interim, activities are being undertaken in support of the planned actions.

Task 7 – CO_2 Procurement

Numerous discussions with potential CO_2 suppliers have taken place. Because of the sensitive nature of negotiations, specifics cannot be shared at the present time.

Task 8 – Transportation and Injection Operations

Nothing to note at this time.

Task 9 – Operational Monitoring and Modeling

Nothing to note at this time.

Task 10 – Site Closure

Nothing to note at this time.

Task 11 – Postinjection Monitoring and Modeling

Nothing to note at this time.

Task 12 – Project Assessment

Nothing to note at this time.

Task 13 – Project Management

Nothing to note at this time.

PHASE III PRODUCTS OR TECHNOLOGY TRANSFER ACTIVITIES

Task 1 – Regional Characterization

The third PCOR Partnership geology work group meeting was held in September in conjunction with the PCOR Partnership 2008 Annual Meeting. The meeting was an opportunity for EERC researchers and PCOR Partnership subcontractors working on geologic sequestration assessments to share recent findings with other geologists and geologic and petroleum engineers.

Task 2 – Public Outreach and Education

A presentation on the task activities and accomplishments was prepared and given at the PCOR Partnership Annual Meeting in September.

Task 3 – Permitting and NEPA Compliance

A spreadsheet that compares and contrasts the EPA-proposed rules for geologic sequestration with WRI Guidelines and IOGCC model rules was developed, and a draft of this document was provided to interested PCOR Partnership members at the annual meeting. Draft comments on EPA's proposed rules have been developed and submitted to an ad hoc committee of PCOR Partnership members.

Task 4 – Site Characterization and Modeling

No deliverables were due for Task 4 during this quarter.

Task 5 – Well Drilling and Completion

This task has not begun (begins Quarter 2 – BP3, Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 6 – Infrastructure Development

A capture and transportation workshop was held in conjunction with the PCOR Partnership Annual Meeting. Workshop topics included an overview of capture technologies, with specific information on monoethanolamine (MEA) scrubbing, chilled ammonia process, membrane technologies, and CO_2 capture from integrated gasification combined-cycle systems. The issues associated with applying CO_2 capture to a coal-fired power plant were discussed, as were both utility and nonutility perspectives on the need for CO_2 capture. Finally, information about CO_2 compression, pipelines, and the economics of CO_2 capture was presented.

Task 7 – CO_2 Procurement

Numerous discussions with potential CO_2 suppliers have taken place. Because of the sensitive nature of negotiations, specifics cannot be shared at the present time.

Task 8 – Transportation and Injection Operations

This task has not begun (begins Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 9 – Operational Monitoring and Modeling

This task has not begun (begins Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 10 – Site Closure

This task has not begun (begins Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 11 – Postinjection Monitoring and Modeling

This task has not begun (begins Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 12 – Project Assessment

This task has not begun (begins Quarter 1 – BP3, Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly and annual progress reports.

Task 13 – Project Management

The deliverable entitled "D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report" was submitted to DOE for approval on June 30, 2008.

MEETINGS/TRAVEL

Representatives from the PCOR Partnership participated in and/or presented at the following meetings and conferences in this reporting period:

- June 29 – July 2, 2008: 4th International Symposium on Energy, Informatics and Cybernetics: EIC '08 in Orlando, Florida
- July 7–11, 2008: meeting with partners to discuss Phase III demonstration and Zama project in Calgary, Alberta
- July 8–11, 2008: Computer Modeling Group Ltd. Technical Symposium in Calgary, Alberta
- August 4–8, 2008: attended the ESRI International Users Conference in San Diego, California
- August 13–15, 2008: Coal-Gen in Louisville, Kentucky
- August 25–28, 2008: attended the Power Plant Air Pollutant Control "Mega" Symposium in Baltimore, Maryland
- September 16–18, 2008: PCOR Partnership Annual Meeting in Maple Grove, Minnesota
- September 24, 2008: UIC and CO_2 Geosequestration Seminar, Cincinnati, Ohio
- September 30, 2008: Attended EPA public meeting on proposed rules for geologic sequestration in Chicago, Illinois
- September 29 – October 2, 2008: Pittsburgh Coal Conference in Pittsburgh, Pennsylvania

Materials presented at these meetings are available to partners on the PCOR Partnership DSS Web site (http://gis.undeerc.org/website/pcorp/).

REFERENCES

None.